WSR-88D Program Software Changes
That May Impact
Radar Product Central Collection Dissemination Service (RPCCDS) Users

Updated 15 April 2005

PURPOSE:

This summary is intended to assist RPCCDS users plan for WSR-88D changes which may impact data format, data frequency, or data quality. While many changes are made to the WSR-88D Radar Product Generator (RPG) software during software releases to field sites, only a small subset may affect RPCCDS users.

CURRENT:

Build 6.1: This software was released to the field starting on 7 March 2005. The software corrects a problem with the WSR-88D SUPEROB product the National Center for Environmental Prediction uses to initialize numerical models. Users of the RPCCDS should not see a change in the products they receive.

Build 7: The target software installation sites and dates (subject to change) for the Build 7 Beta Test are listed below. The software is scheduled to begin to be released to field sites in mid June 2005. The software will be released over a 5-week period and sites will have 60 days after receipt of the software kit to install the software on their Radar Product Generator (RPG).

Wilmington, NC	Installed
Atlanta, GA	Installed
Jacksonville, FL	Installed
Flagstaff, AZ	Installed
Las Vegas, NM	April 26 or 27
Edwards AFB, CA	April 27 or 28
South Kauai, HI	May 2 or 3

The primary changes in RPG Build 7 are to implement the interface to the Open Radar Data Acquisition unit (Open RDA) to support testing and deployment of the Open RDA. The first of five beta tests/installations of the Open RDA is scheduled for late August 2005. The Open RDA deployment, scheduled to begin in late 2005, will be completed within 12 months. No new RPCCDS products will appear in Build 7 or Build 8 due to the Open RDA.

PLANNED CHANGES:

Build 8: Deployment of RPG Build 8 software is scheduled to begin in April 2006.

The Storm Cell Identification and Tracking (SCIT) algorithm used to generate Product 58, Storm Tracking Information (STI), will be enhanced in Build 8. The format of the product will not change, however, the content of the text portion (TAB) of the STI and Product 62, Storm Structure (SS), products will contain three SCIT filter configuration data values for information purposes. Users will be provided information on these text changes and sample data in advance of the release of Build 8 to field sites. A brief summary of the algorithm changes follows:

The input reflectivity data will be median filtered (smoothed) using a kernel which adjusts for different ranges. These filtered data are used to identify storm cells and diagnose most storm cell attributes. Unfiltered data will be used to determine the 2-dimensional feature maximum reflectivity. Tests National Severe Storm Laboratory scientists have performed indicate the filtering results in fewer storms being identified and large storms near the radar are less likely to be fragmented. This results in improved storm cell identification and in a lower tracking error rate.

Some fields in the alphanumeric component of certain Level III precipitation products will be removed in Build 8. These fields were associated with logic in the precipitation processing software referred to as the "Time Continuity Test". Affected products include: OHP, STP, DPA, DSP, DHR, and SPD. All version numbers for these products remain untouched. Details of the changes will be included in the Build 8 Interface Control Document (ICD) for RPG-to-Class 1 Users. The ICD will be available later this year and a notice will be sent to users when the ICD becomes available. The format of the graphic product is not changing.

Change in Default Precipitation VCP: Beginning with the release of Build 8, sites will be allowed to change the default precipitation volume coverage pattern (VCP) from VCP 21 based on agreement by the local Unit Radar Committee. Some sites may elect to not change the default precipitation VCP while others may only change the default precipitation VCP seasonally or on a case-by-case basis – all with the goal of maximizing the performance of the WSR-88D to support forecast and warning operations. Software to be added in Build 8 will automatically return the radar to clear air mode when a precipitation event has ended. (Currently the switch to clear air mode requires manual intervention.) This mode change software should reduce the bandwidth increase due to the change in default precipitation VCP.

ADDITIONAL INFORMATION:
The Radar Operations Center is heading a project to update the Federal Meteorological Handbook No. 11 (FMH-11). The handbook consists of parts A – D. The updated version of Part A can be found at: http://www.ofcm.gov/fmh11/fmh11.htm. The updated versions of parts B – D are expected to be released in the summer of 2005.

The Radar Operations Center (ROC) has a URL (http://www.roc.noaa.gov/ops/ssm.asp) for users to obtain:

(1) A list of sites and which RPG software build the site is using, and
(2) A list of sites and which volume coverage pattern the site is using, during the last automated hourly ROC call to the RPG.

Warning Decision Training Branch training materials prepared for WSR-88D NEXRAD agency operators can be found in the Tech Updates section at: http://www.wdtb.noaa.gov/. While many of the changes discussed are not available on the RPCCDS, the training material provides information on new capabilities provided to NEXRAD Agency WSR-88D users.

Please send suggestions, comments and questions on the materials in this summary to Tim.D.Crum@noaa.gov.